

**National EPA-Tribal Science Council (TSC)
Conference Call Roll Call and Key Discussion Points
Monday, October 18, 2021
2:00–3:30 p.m. EDT**

Roll Call

Tribal Caucus

- ___ Region 1: William (Billy) Longfellow
(Passamaquoddy at Sipayik)
- ___ Region 1 *Alternate*: Trevor White
(Passamaquoddy Tribe of Indian Township)
- ✓ Region 2: Neil Patterson, Jr. (Tuscarora Nation),
Chair
- ✓ Region 3: Dana Adkins, Chickahominy Indian
Tribe
- ✓ Region 4: Katie Tiger (Eastern Band of
Cherokee Indians)
- ___ Region 4 *Alternate*: Jerry Cain (Mississippi
Band of Choctaw Indians)
- ✓ Region 5: Scott Walz (Shakopee Mdewakanton
Sioux Community)
- ___ Region 6: Craig Kreman (Quapaw Tribe)
- ___ Region 6 *Alternate*: Tammy Belone (Pueblo of
Jemez)
- ✓ Region 7: Page Hingst (Santee Sioux Nation of
Nebraska)
- ✓ Region 7 *Alternate*: Misha Mazurkewycz (Ponca
Tribe of Nebraska)
- ___ Region 8: Joshua Tweeton (Spirit Lake Tribe)
- ___ Region 8 *Alternate*: Allyson Two Bears
(Standing Rock Sioux Tribe)
- ___ Region 9: Shasta Gaughen (Pala Band of
Mission Indians)
- ___ Region 9 *Alternate*: Crystal Robinson (Quartz
Valley Indian Reservation)
- ___ Region 10: Lee Juan Tyler (Shoshone-Bannock
Tribes)
- ___ Region 10 *Alternate*: Kelly Wright (Shoshone-
Bannock Tribes)
- ___ Region 10 (Alaska): Vacant

Support Personnel

- ✓ Monica Rodia, TSC Executive Secretary
- ✓ Hari Karne, EPA ORD/ORAU Student
Contractor
- ✓ Kristen LeBaron, Support Contractor (SCG)

EPA Caucus

- ✓ Region 1: Luke Hullinger
- ✓ Region 2: Kai Tang
- ✓ Region 3: Regina Poeske
- ✓ Region 4: Dawn Taylor
- ✓ Region 5: Janette Marsh
- ___ Region 5 *Alternate*: Mari Nord
- ✓ Region 6: Alexandra (Alexa) Olson
- ___ Region 7: Eliodora Chamberlain
- ✓ Region 8: Monia Ben-Khaled
- ✓ Region 8: Justin Bleiler
- ___ Region 9: Rebecca Jamison
- ___ Region 9 *Alternate*: Danielle Huang
- ___ Region 10: Vacant
- ✓ AIEO: Francine St. Denis
- ✓ OAR: Amanda Kaufman
- ___ OCHP: Ted Coopwood
- ✓ OCSPP: Karen Hamernik
- ___ OCSPP *Alternate*: Amanda Hauff
- ___ OLEM: David Charters
- ✓ OMS: Elizabeth (Beth) Jackson
- ✓ ORD: Brenda Rashleigh, Chair
- ✓ ORD: José Zambrana, Liaison
- ✓ OW: Karen Gude

Invited Guests

- ✓ Valerie Blank, EPA ORD
- ✓ Kathie Dionisio, EPA ORD
- ✓ Andrea Guajardo, EPA Region 8
- ✓ Annette Guiseppi-Elie, EPA ORD
- ✓ Maureen Gwinn, EPA ORD
- ✓ Sherri Hunt, EPA ORD
- ✓ Samantha Jones, EPA ORD
- ✓ Michelle Latham, EPA ORD
- ✓ Sang Don Lee, EPA ORD
- ✓ Sarah Mazur, EPA ORD
- ✓ Beth Owens, EPA ORD
- ✓ Bruce Rodan, EPA ORD
- ✓ Mary Ross, EPA ORD
- ✓ Shawn Ryan, EPA ORD
- ✓ Emily Trentacoste, EPA ORD
- ✓ Suzanne van Drunick, EPA ORD
- ✓ Joe Williams, EPA ORD

Action Items

1. TSC members will read the monthly teleconference minutes to ensure that they are aware of current activities, news and action items.

Key Discussion Points

Roll Call and Distribution of Meeting Minutes

- Monica Rodia took the roll and announced that the TSC September monthly call minutes had been finalized and distributed.
- TSC members should read the minutes each month to ensure that they are aware of current activities, news and action items.

Caucus Report Outs

- Brenda Rashleigh reported that during its recent meeting, the EPA Caucus discussed the recent National Tribal Operations Committee meeting, at which the EPA Administrator reaffirmed the *EPA Policy for the Administration of Environmental Programs on Indian Reservations* (EPA 1984 Indian Policy). The Caucus also discussed the upcoming Co-Chair transition; a new Co-Chair will be selected from the Office of Research and Development (ORD), and Brenda Rashleigh will transition into the role of ORD Liaison. José Zambrana will rotate off of the TSC; his leadership and service have been greatly appreciated. Also discussed was TSC involvement in the upcoming ORD fiscal year 2023–2026 research planning cycle and the planned release of the next *EPA Tribal Science Bulletin* by December.
- Misha Mazurkewycz reported that the Tribal Caucus had met and also discussed the transition of leadership, including how the Tribal Caucus would determine the Co-Chair. Those present on the call nominated Neil Patterson to continue in the role. Tribal Representatives were asked to contact Neil via email about their willingness to serve as Co-Chair.

TSC Science Seminar: ORD Research Planning—Research Scoping Discussion With the TSC, Bruce Rodan and EPA National Program Directors (NPDs) for Research, ORD, EPA

- Neil explained that the Tribal Caucus has been discussing the precautionary principle and applying that way of thinking to strategic research. PFAS also is a tribal concern. He emphasized that consultation must occur on a national level. All federally recognized, sovereign tribes must be consulted on a government-to-government basis in a manner that reflects the EPA 1984 Indian Policy.
- Bruce Rodan commented that Neil's past remarks have made him consider tribal cultural wisdom as it relates to his own ongoing learning. The pandemic has brought home the concepts of "place" and "time" for him as the seasons unfold.
- Bruce cited the recent ORD tribal listening sessions devoted to wildfire, climate change and cumulative impacts research, at which ORD staff recognized the importance of identifying research of relevance to tribes and the need for focused commitment and engagement.
- This initial ORD engagement with the TSC is in advance of a larger engagement that will include all of the EPA-Tribal Partnership Groups and Regional Tribal Operations Committees (RTOCs). Although these early engagement opportunities are not government-to-government consultation, they are helpful to ORD as it looks toward to full government-to-government consultation with tribes in early 2022.

- ORD's six National Research Programs address all relevant human and environmental health challenges in all media. ORD's cross-cutting issues of interest are environmental justice, climate change, community resiliency, cumulative impacts, children's environmental health, and contaminants of immediate and emerging concern.
- ORD conducts tribal engagement so that its research products are developed through ongoing coordination with tribes to ensure that these products meet the needs of tribes on the frontline of protecting human health and the environment. During tribal engagement, ORD's research programs engage with their associated EPA-Tribal Partnership Groups and all of the RTOCs.
- The six NPDs, or their representatives as appropriate, provided an overview of their research portfolios, including topics of tribal interest.
 - Sherri Hunt, Assistant Center Director in the Air, Climate and Energy (ACE) Research Program, filled in for Bryan Hubbell, the ACE NPD. Tribes have indicated that they are interested in emerging wildfire threats, indoor air quality (IAQ), hazardous air pollutants and transportation, and climate change. ACE has identified six key challenges: climate change, environmental and climate injustice, criteria and toxic air pollution, wildfires, IAQ, and energy and transportation transformations. The ACE research portfolio has been divided into two topics: (1) understanding air pollution and climate change and their impacts on human health and ecosystems and (2) responding to risks and impacts and preparing for the future.
 - Maureen Gwinn, NPD, Safe and Healthy Communities (SHC) Research Program, shared what her program has heard from various tribal groups (PFAS Working Group and Tribal Waste and Response Steering Committee), as well as at the recent ORD tribal listening sessions about cumulative impacts. Tribes have indicated that climate change and environmental justice are woven throughout all of their issues of concern. Specific tribal concerns include community resilience to natural disasters and extreme weather events, sustainable waste management and beneficial reuse of waste, and how to develop these programs with traditional ecological knowledge in mind; PFAS also is a tribal issue of concern. Areas of new or increasing emphasis for SHC include research related to climate change and environmental justice and employing an integrated systems approach. The research portfolio has been divided into three topics: (1) advancing remediation and restoration of contaminated sites, (2) materials management and beneficial reuse of waste, and (3) an integrated systems approach to building healthy and resilient communities.
 - Shawn Ryan, NPD, Homeland Security (HS) Research Program, described his program's areas of new or increasing emphasis, such as incorporating resilience equity and environmental justice throughout the program and emphasizing cumulative risk factors and climate change effects. The HS research portfolio has been divided into three topics: (1) contaminant characterization and risk assessment, (2) environmental cleanup and infrastructure remediation, and (3) community engagement and systems-based tools supporting resilience equity.
 - Annette Guiseppi-Elie, NPD, Chemical Safety and Sustainability (CSS) Research Program, explained that tribes monitor waters for various pollutants and are interested in the potential synergistic effects of chemical combinations. Some tribal lifeways result in higher exposures and unique exposure routes that are not properly characterized for risk assessment. Tribes also are interested in bioaccumulation in subsistence and culturally significant species. Areas of new or increasing emphasis for CSS include incorporating research relevant to equity and environmental justice, climate change, cumulative impacts, and resilience into risk assessments, as appropriate, as well as an increased focus on translation for decision-making. The research portfolio has been divided into three topics: (1) chemical evaluation, (2) complex systems science, and (3) knowledge delivery and solutions-driven translation to support chemical safety decision-making.

- Samantha Jones, NPD, Health and Environmental Risk Assessment (HERA) Research Program, explained that areas of new or increasing emphasis in her program include incorporating research relevant to equity and environmental justice, climate change, cumulative impacts, and resilience into risk assessments, as appropriate (similar to CSS), and ensuring that assessment products and translational support are tailored to specific decisions or application context. The research portfolio has been divided into two topics: (1) science assessments and translation and (2) advancing the science and practice of risk assessment.
- Suzanne van Drunick, NPD, Safe and Sustainable Water Resources (SSWR) Research Program, noted that tribal high-priority issues related to water include nutrients and harmful algal blooms (HABs), water treatment and infrastructure, and climate change and wildfires. The research program will increase its emphasis on using the One Health approach for collaborative problem solving; climate, resilience, cumulative risk and impacts, and equity also will have increased emphasis. New research areas include a blue carbon solutions-driven research project and wildland fire impacts on water quality. The research portfolio has been divided into three topics: (1) watersheds, (2) nutrients and HABs, and (3) water treatment and infrastructure.
- Bruce noted the importance of planning research in the “Goldilocks zone”—not too generalized but not so specific that activities important to tribes are overlooked. The goal of this early engagement is to develop a list of products based on subjects of tribal interest and use this list as the basis for the upcoming tribal consultation. Bruce summarized the potential subjects of greatest tribal interest within each research program:
 - Health and ecosystem effects of air pollution and climate change (ACE)
 - Empowering communities and individuals to improve public and ecosystem health (ACE)
 - Responding to the risks of fires, floods and other extreme events (ACE, SSWR)
 - Communities, remediation and resilience (SHC, HS, SSWR)
 - Solvent vapor intrusion (SHC)
 - Systems-based decision-making (HS)
 - Waste management (HS)
 - Chemicals of immediate and emerging concern (SHC, CSS)
 - Tribal lifeways, translation and knowledge delivery, risk assessment, and assessment methodologies (HERA, CSS, SSWR)
 - Assessment and management of HABs (SSWR)
 - Drinking water and distribution systems (SSWR)
- Neil commented that many of these topics have been discussed within the TSC, particularly tribal lifeways and risk assessment. During the TSC’s Spring 2021 Virtual Science Meeting, the members heard from Jamie Donatuto and Larry Campbell from the Swinomish Indian Tribal Community in Washington state—who often speak to the need for tribal-specific exposure scenarios—and also discussed EPA’s *Exposure Factors Handbook*. This is in parallel with another topic that the TSC has been pursuing, the development and use of tribal research protocols and frameworks. It is critical that the development of exposure scenarios and research around risk is supported by the community and follows community protocols. In some cases, these protocols may not exist in written form, but they do exist. It takes time and effort to sit down with the communities and talk about issues around suppression. Many communities are trying to reach a certain level of sustenance from the natural world. “Broad brush” approaches depicting tribal lifeways as one thing or another are missing the full picture. Many Indigenous communities have a mosaic of places that are part of their cultural lifeways; therefore, the ideas of residence time and exposure in a particular place at a particular time become less important when talking about restoring tribal lifeways. The TSC Tribal Caucus is interested in a new chapter or body of work in the *Exposure Factors Handbook* that speaks to tailored tribal lifeways assessment and the goals of tribal lifeways and restoration (e.g., restoring relationships with locations that have been severed, in some cases since First Contact). The response that some tribes are having

to climate change is similar to tribal responses to colonialism. Therefore, the response to the notion of transition is “Transition to what?” The transition to tribal development of health indicators was discussed at the spring meeting. Each sovereign tribal nation has a goal in mind, and it is important to have a dialogue about these goals and the revitalization that is occurring in the community with place and include these in the scenarios.

- Annette explained that CSS began to work on a tribal exposure narrative in 2018 and can continue that line of work. Samantha added that HERA is working with CSS on how to consider tribal context and think differently about tribal exposures for inclusion in the *Exposure Factors Handbook*. Bruce commented that Neil’s input about tribal lifeways assessment is extremely valuable.
- Karen Hamernik noted that the draft EPA strategic plan mentions citizen science. She asked whether ORD’s planning process includes opportunities for citizen science participation. Bruce replied that a priority of the Biden administration is community science. EPA will incorporate community science throughout its activities, empowering communities—including tribal communities—to perform science to address their specific concerns. Methods will be developed that allow a local, state or federal government to receive and act on information from the communities. Tribes have their own version of community science, and it is a priority for ORD to empower tribes to perform their own research to influence decision-making. Maureen added that CSS has discussed how to perform community engagement in a way that reflects the capacity of the community.
- Karen asked about the terminology related to cumulative impacts and aggregate risks. Maureen responded that during the recent tribal listening sessions on cumulative impacts, ORD presented its draft interim definition of “cumulative impacts,” which is “the total burden of health-affecting conditions or circumstances on an individual or community at a given point in time, or over a period of time, and considered within the context of an action or specific exposure to a stressor.” Cumulative impacts provide context for characterizing the potential state of vulnerability of the individual or community (i.e., their ability to withstand or recover from combined hazardous exposures), as well as the total effects on an individual or community, directly and indirectly, through impacts on resources and ecosystems from actions or stressors. ***This draft interim definition still is under discussion.*** In 2003, EPA defined the term “cumulative risk assessment” as “an analysis, characterization and possible quantification of the combined risks to human health or the environment from multiple agents or stressors.”

Announcements

- The TSC members did not offer any announcements.

Next conference call: November 15, 2:00–3:30 p.m. EST